NOAA/OAR Laboratory Resource Deployments for SPLASH/SAIL

PSL- 2 SLR's, 2 Surface Energy Balance Systems, 2 disdrometers, sUAS for atmospheric and surface observing, X-band radar, soil moisture

GML- mobile SURFRAD, RADSYS

GSL - HRRR model output, model eval

ARL - 2 Reference Precip gauges, 2 Surface Energy Balance Systems, soil moisture

NSSL - CLAMPS with boundary Layer Profilers

Deployment will begin late summer/early fall 2021 - July 2022.

photo Courtesy Gijs de Boer, March 2021

Eddy Covariance Measurements

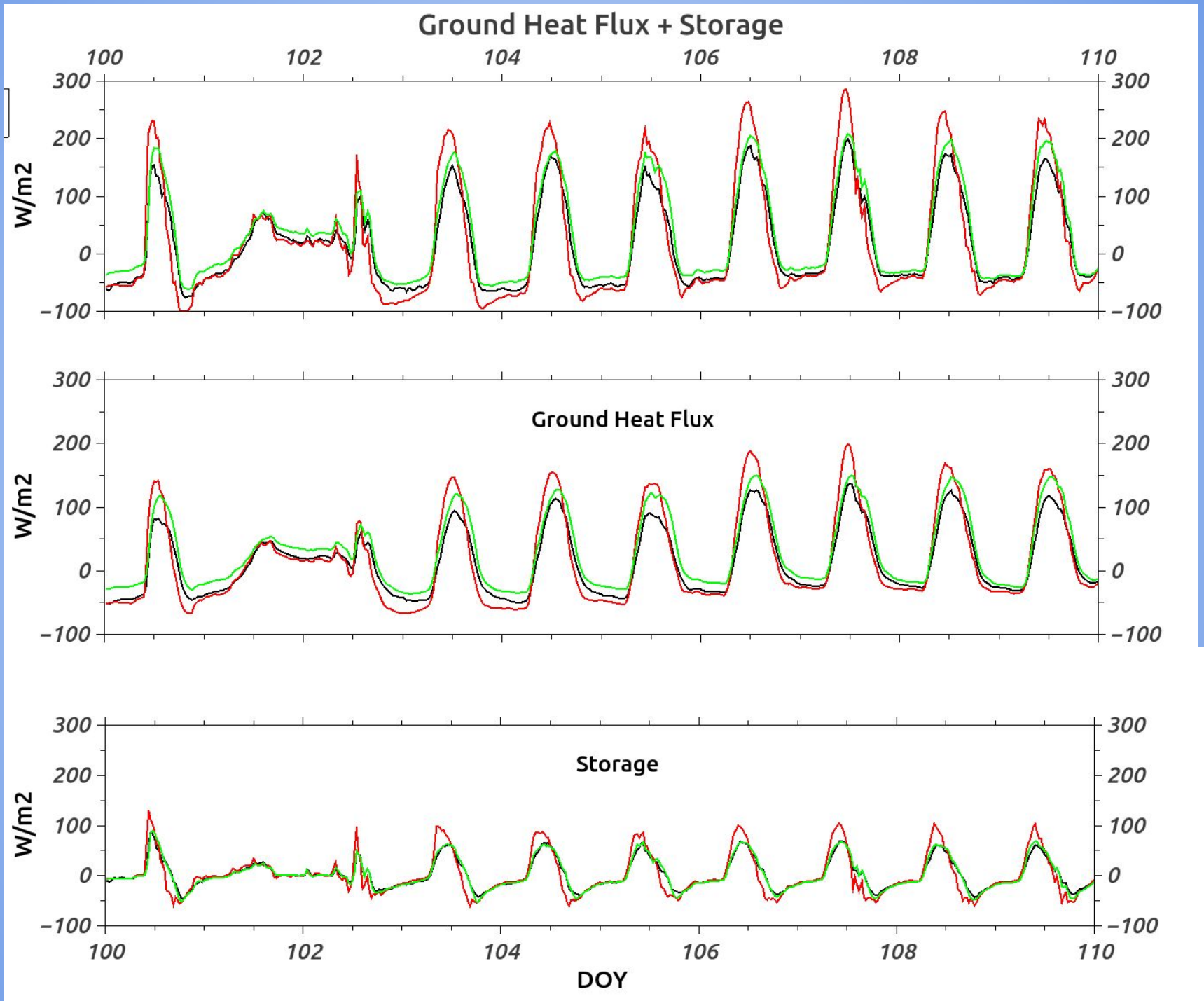
Sensors	RMY 81000VRE, LI-7500DS open path irga
Sample heights	2.5, 10 m
Sample rate	10 Hz
Averaging period	30 min-60 min
Measured quantities	H, LE, CO2, u_*, u'^2, v'^2, w'^2
Derived quantities	z_0
Number of systems	2

Radiation Measurements

Sensors	Hukseflux 4 component net radiometer, LICOR
Sample heights	~ 5 m
Sample rate	5 sec
Averaging period	1 min
Measured quantities	SW↑,SW↓,LW↑,LW↓ PAR↑ PAR↓
Derived quantities	Shortwave albedo, Ts x 3, broadband NDVI
Number of systems	1

Soil Measurements

Sensors	Soil thermistor profile (ATDD), CSI SoilVue 10
Soil temp depths	5,10,20,30,40,50 cm
Soil moisture depths	same
Sample rate	10 sec
Averaging period	1 min
Measured quantities	Temperature, VWC
Derived quantities	Soil heat flux, soil heat storage
Number of systems	1 (3 reps per site)


Ground Heat Flux + Storage
100
102
104
106
108
110
300
200
100
0
−100
W/m2
Ground Heat Flux
Storage
DOY

Meteorological Measurements

Sensors	Pressure, T, RH, precipitation
Sample heights	10 m
Sample rate	5 sec
Averaging period	1 min
Measured quantities	Air temperature, humidity, barometric pressure
Number of systems	1

Other Measurements

Leaf Area Index	**---**
Soil thermal conductivity	**----**
Soil Physical Properties	**---**
Hyperspectral (400 – 900 nm) reflectance	------
Tower camera	
Number of locations	1

Micrometeorological systems